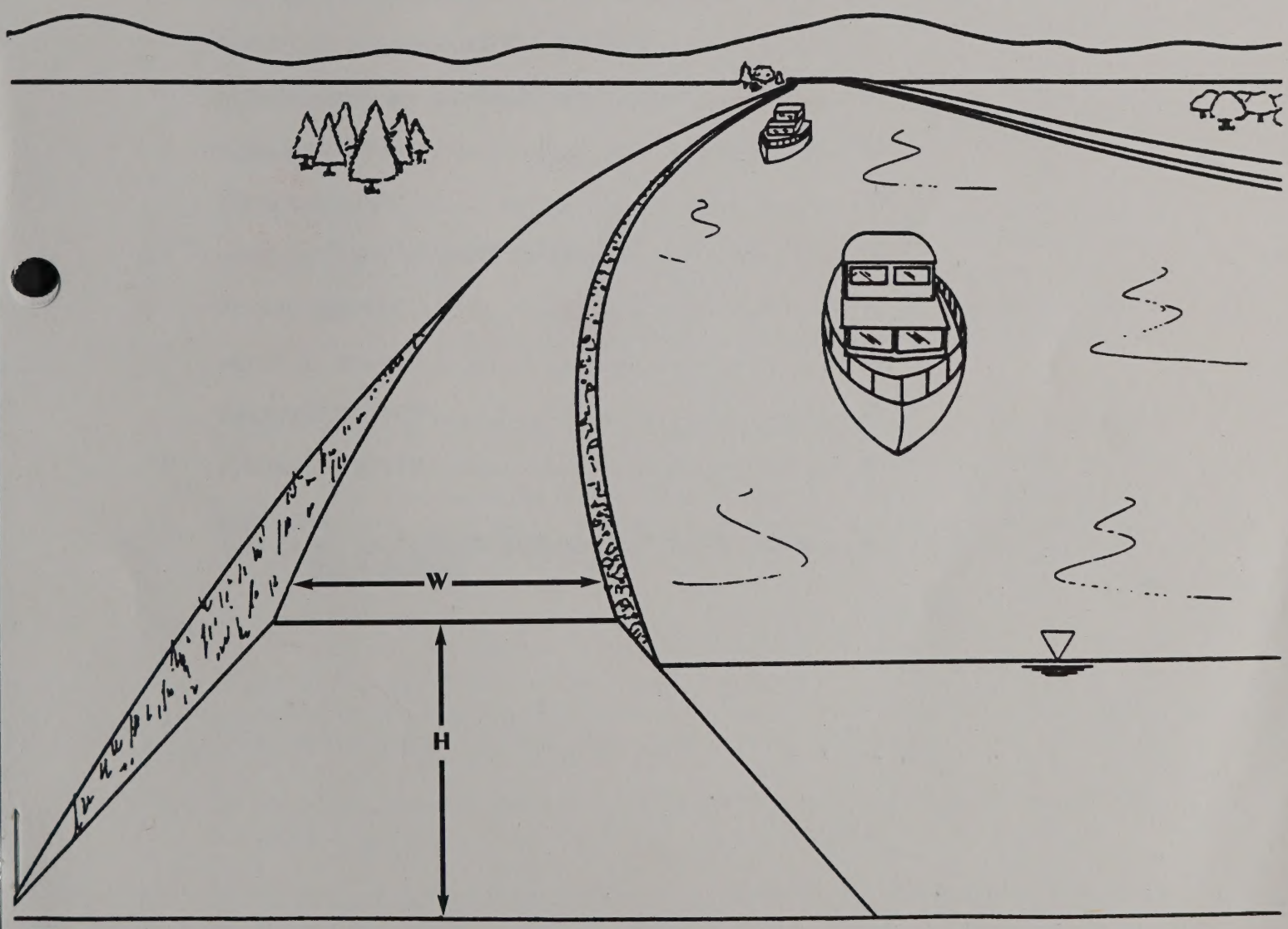
DFD

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

1998 CANAL IMPOUNDING EMBANKMENT CONDITION SURVEY

GEOTECHNICAL ENGINEERING
BUREAU



SEPTEMBER 1999

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NYSDOT
Library
50 Wolf Road, POD 34
Albany, New York 12232

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APPENDIX
1992 CANAL RIP/FLOODING EMBANKMENT INSPECTIONS A-1
FIELD SHEETS

NYSDOT
Library
50 Wolf Road, POD 34
Albany, New York 12232

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
ALBANY, N.Y. 12232

JOSEPH H. BOARDMAN
COMMISSIONER

GEORGE E. PATAKI
GOVERNOR

September 10, 1999

Address Reply To:
Mr. Wesley P. Moody, Director
NYS Dept. of Transportation
Geotechnical Engineering Bureau
Bldg. 7 - State Campus
1220 Washington Avenue
Albany, NY 12232-0863

Mr. Duane Dodds, Director
Design Bureau, 3rd Floor
c/o NYS Thruway Authority
200 Southern Blvd.
P.O. Box 189
Albany, NY 12201-0189

Dear Mr. Dodds:

The purpose of this report is for this Bureau to provide field evaluations of the water impounding embankments along the Canal. Our inspections evaluate the conditions of the earth embankments only. We understand that the structure portions (concrete walls and culverts) are inspected by each Division. Some culverts have water leaking into them from joints or possibly cracks. Only at locations where structural deficiencies are causing stress to the embankment area have we included them in our evaluations.

Attached please find the summary of the 1998 Canal Impounding Embankment Condition Survey. The Condition Survey was compiled with the use of the thermal imaging report prepared by PAR Government Systems Corporation, March 26, 1998 (based on a flight flown in fall of 1997) and the physical site inspections performed by various members of this Bureau, with assistance from Division personnel. The thermal imaging report covers most of the embankment involved. The printed thermal imaging report was used as an overview of the Canal, and the images on disk (viewed with Arc View) allow zooming to a specific site for more detail.

The summary charts provide both a rating and ranking system for each portion of embankment to catagorize embankment condition and help prioritize repairs, where necessary. Notice that the report format has been restructured. The following changes have been made:

1. The report is organized by the county in which the Canal is located and the side of the Canal the embankment is located (North, South, East, West).

2. At your request, the rating system has been changed to a scale of one (1) to seven (7) to conform to the Canal Maintenance Quality Manual 1993, Appendix G, Page 20,

(prepared by others) rather than the one (1) to four (4) rating system established by this Bureau in 1988. In both systems, low numbers indicate more severe problems.

3. The station limits have been modified:

   a. Several embankment sections less than five feet in height have been removed from the list. Embankments retaining less than a few feet of water (because of the inboard freeboard) should not be included.

   b. Embankment sections adjacent to each other have been combined where appropriate.

   c. Embankment stations have been adjusted to reflect the station limits determined from the residency sheet and reported on the field inspections sheets.

Additionally, the Risk Assessment system this Bureau uses to evaluate the individual embankment sections has been revised. Our former system used a sliding numerical scale for rating the sites to create a bias when ranking the problem areas, and the scale is now a linear numerical scale. Also, two categories were added. The two parameters that were added - outboard slope vegetation growth, and inboard slope condition - appeared so frequently in the comments section of the evaluation forms, that it was necessary to include them as categories.

The evolution of the numerical rating system came about through the experience of completing two inspections, one in 1988 and one in 1993. When the old rating system was devised for the 1988 field survey, we had no previous inventory to use as a basis for the range of severity and number of problem sites that would be encountered. Thus, a very broad band rating system was instituted that facilitated the ranking process. Since many of the serious problem sites have been repaired through the diligent effort of Canal Maintenance forces and the expenditure of contract funds, the latitude originally designed into the rating system is not needed. For the serious life threatening problems that may be found, the new system still has provisions to recommend immediate repair or frequent (weekly) monitoring.

To understand how these two systems compare, see the attached Figures 1, 2, and 3 which explain the changes to the risk assessment systems. The first shows the current rating/ranking system, the second shows the original rating/ranking system, and the third compares or superimposes the two.

As of this date, there are six project sites under construction or in the final stages of design, that have been identified as Class (2) {need repair} under the old system. They would have been rated the same under the new system.

There were several sites around Rochester which had significant tree damage from the September 1998 wind storm. Many areas were not cleared or restored prior to the fall inspection, thus we recommend a follow up inspection in the Fall of 1999 to evaluate embankment conditions as a result of tree blow downs (root systems remove a large portion of earth) or the clean-up operations. It is because of this type of damage that past inspection reports recommended that trees be removed from the embankment slopes, as required by dam maintenance guidelines. Currently, the Canal Corporation is seeking input from the parties involved in dam design & evaluation to develop a method to address all the existing woody growth (trees and bushes) and the resulting root system.

If you have any questions, call T. Minnitti @ 457-4782.

Sincerely,

WESLEY P. MOODY, Director
Geotechnical Engineering Bureau

ORIGINAL SIGNED BY
P. A. WALTON

By: _____
Phillip A. Walton
Associate Soils Engineer

PAW/AM/DJB
Attachments

c: Paul J. Mack, Director, Technical Services Division, 7A-210, MC 0862

1998 - RISK ASSESSMENT SYSTEM

PARAMETER	WEIGHTED FACTORS							RANK
SEEPAGE	5	0	1		3		5	
	CRITERIA	NONE	MOIST AREA		BLEEDING		SEEPAGE	
	Description		SOFT TO WALK ON		CATTAILS ON SLOPE		**	
TOP WIDTH	3	0	1	2	3	4	5	
(SEE TABLE "A" ATTACHED)	CRITERIA	EQUAL TO OR GREAT OR THAN	LESS BY 5'	LESS BY 10'	LESS BY 15'	LESS BY 20'	LESS THAN 5' WIDE **	
OUTBOARD EMBANKMENT	1	0	1	2	3	4	5	
HEIGHT	CRITERIA	LESS THAN 5'	5'	10'	15'	20'	GREATER THAN 20'	
OUTBOARD SLOPE	3	0		2		4	5	
1VERTICAL ON ?? HORIZONTAL	CRITERIA	1V ON 3H OR FLATTER		1 ON 2		1 ON 1	STEEPER THAN 1 ON 1	
OUTBOARD SLOPE	1	0		2		4	5	
GROWTH	CRITERIA	GRASS		WOODY GROWTH		TREES	COMPLETELY OVERGROWN	
INBOARD SLOPE	1	0	1		3		5	
CONDITION (1V ON 2H STANDARD)	CRITERIA	RIP-RAP IN PLACE	SLOPE STABLE		SLOUGHING		ERODED	
ADJACENT TERRAIN	1	0	1		3		5	
	CRITERIA	LAND SLOPES UPHILL	WOODED-NO HOMES VISIBLE		ACTIVE FARMLAND		DEVELOPED	

** NOTIFY CANAL SUPERINTENDENT IMMEDIATELY

PLEASE PROVIDE COMMENTS BELOW IF A FIELD CONDITION EXISTS
WHICH IS NOT ACCOUNTED FOR WITHIN THE TABLE
(e.g. SLOUGHING, EROSION, DISTRESSED STRUCTURE, etc.).

TOTAL

RATING SYSTEM

1= Immediate emergency contract recommended
2= Begin monitoring system and schedule repairs soon
3= Should be improved prior to next 5 year inspection
4= Should be improved as part of normal scheduling
5= Satisfactory but shows signs of aging
6= Normal aging
7= No Deterioration

RATING

FIGURE 1 - EMBANKMENT RATING SYSTEM REVISED IN 1998

RISK ASSESSMENT

PARAMETER	WEIGHTED POINTS * NOTE: INTERPOLATION BETWEEN POINTS IS BASED UPON THE INSPECTOR'S OBSERVATIONS				* INSPECTOR'S RANKING
SEEPAGE	1----------> NONE	6----------> BLEEDING	36----------> FLOWING WATER	216 FLOWING WATER CARRYING FINES **	
OUTBOARD SLOPE	1----------> 1V ON 3H OR FLATTER	4----------> STEEPER THAN 1V ON 3H	16----------> STEEPER THAN 1V ON 2H	64 1V ON 1H OR STEEPER	
EMBANKMENT HEIGHT	1----------> 5'	4----------> 10'	16----------> 15'	64 20' OR GREATER	
TOP WIDTH	1----------> > OR= TO TABLE "A"	4----------> < TABLE "A" BY 5'	16----------> < TABLE "A" BY 15'	64 < TABLE "A" BY MORE THAN 15' OR LESS THAN 10' WIDE	
ADJACENT TERRAIN	1----------> UNDEVELOPED	4----------> ACTIVE FARMLAND	16----------> SPARSELY DEVELOPED	64 DENSELY DEVELOPED	
	** ***NOTIFY CANAL SUPERINTENDENT IMMEDIATELY*** PLEASE PROVIDE COMMENTS BELOW AND ENTER APPROPRIATE POINTS IF A FIELD CONDITION EXISTS WHICH IS NOT ACCOUNTED FOR WITHIN THE TABLE (e.g. SLOUGHING, EROSION, DISTRESSED STRUCTURE, etc.). _____ _____ _____ _____ _____ _____				***TOTAL***

FIGURE 2 - RATING FORM USED IN 1987 AND 1993 INSPECTIONS

1998 - RISK ASSESSMENT SYSTEM COMPARED TO PREVIOUS RATING SYSTEM

PARAMETER	WEIGHTED FACTORS							RANK
SEEPAGE	5	0	5		15		25	
	CRITERIA	NONE	MOIST AREA		BLEEDING		SEEPAGE	
	Description		SOFT TO WALK ON		CATTAILS ON SLOPE		**	
		0----------5			6----------35		36----------216	
TOP WIDTH	3	0	3	6	9	12		
(SEE TABLE "A" ATTACHED)	CRITERIA	EQUAL TO OR GREAT OR THAN	LESS BY 5'	LESS BY 10'	LESS BY 15'	LESS BY 20'	LESS THAN 5' WIDE **	
		1----------3	4----------15		16----------64			
OUTBOARD EMBANKMENT HEIGHT	1	0	1	2	3	4	5	
	CRITERIA	LESS THAN 5'	5'	10'	15'	20'	GREATER THAN 20'	
		1----------3	4----------15		16----------64			
OUTBOARD SLOPE	3	0		6		12	15	
1VERTICAL ON ?? HORIZONTAL	CRITERIA	1V ON 3H OR FLATTER		1 ON 2		1 ON 1	STEEPER THAN 1 ON 1	
		1 ---3	4----------15	16 ------64	16----------64			
OUTBOARD SLOPE GROWTH	1	0		2		4	5	
	CRITERIA	GRASS		WOODY GROWTH		TREES	COMPLETELY OVERGROWN	
INBOARD SLOPE CONDITION (1V ON 2H STANDARD)	1	0	1		3		5	
	CRITERIA	RIP-RAP IN PLACE	SLOPE STABLE		SLOUGHING		ERODED	
ADJACENT TERRAIN	1	0	1		3		5	
	CRITERIA	LAND SLOPES UPHILL	WOODED-NO HOMES VISIBLE		ACTIVE FARMLAND		DEVELOPED	
		1----------3		4----------15		16----------64		

** NOTIFY CANAL SUPERINTENDENT IMMEDIATELY

PLEASE PROVIDE COMMENTS BELOW IF A FIELD CONDITION EXISTS
WHICH IS NOT ACCOUNTED FOR WITHIN THE TABLE
(e.g. SLOUGHING, EROSION, DISTRESSED STRUCTURE, etc.).

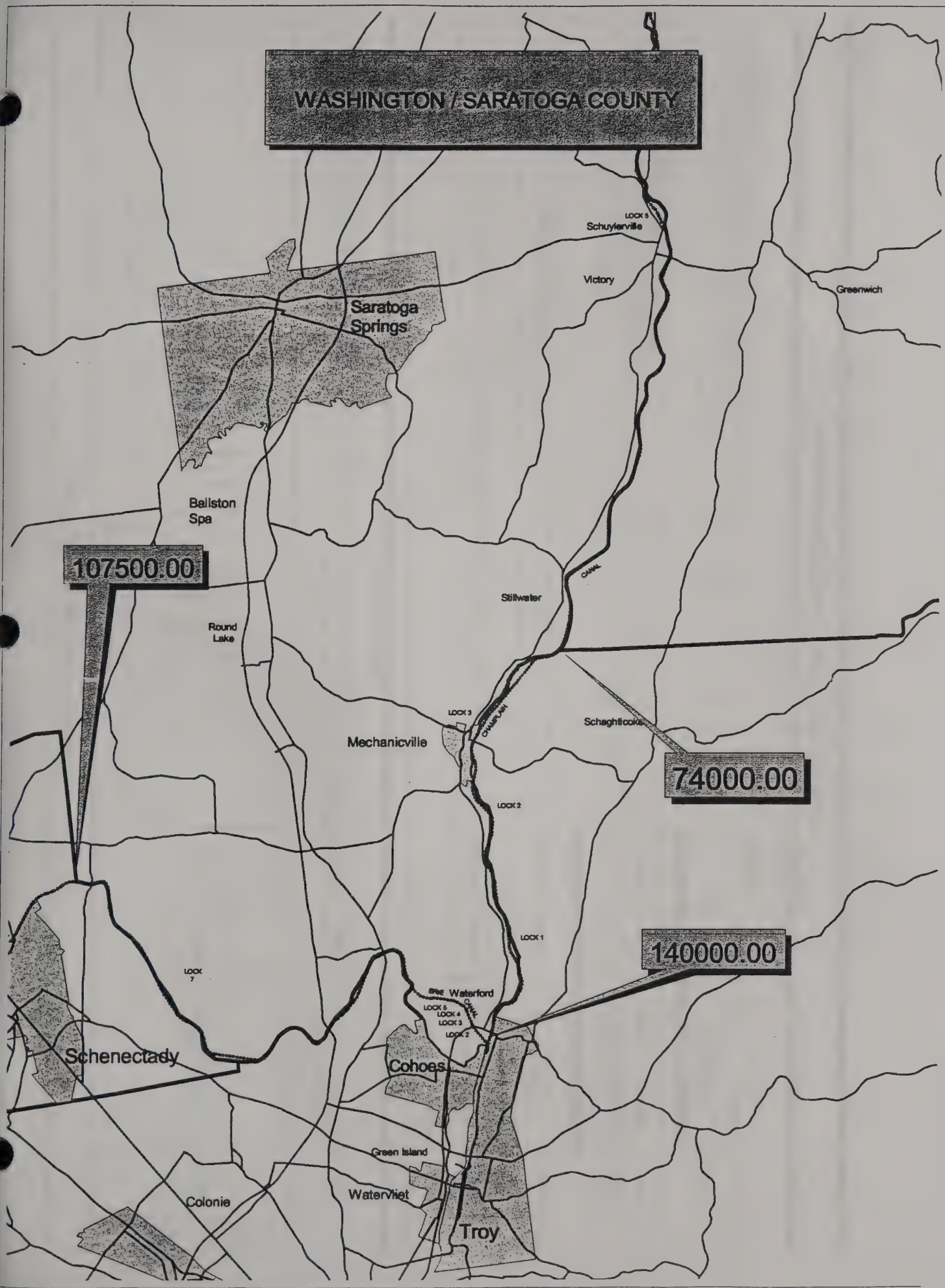
TOTAL

RATING SYSTEM

1= Immediate emergency contract recommended
2= Begin monitoring system and schedule repairs soon
3= Should be improved prior to next 5 year inspection
4= Should be improved as part of normal scheduling
5= Satisfactory but shows signs of aging
6= Normal aging
7= No Deterioration

RATING

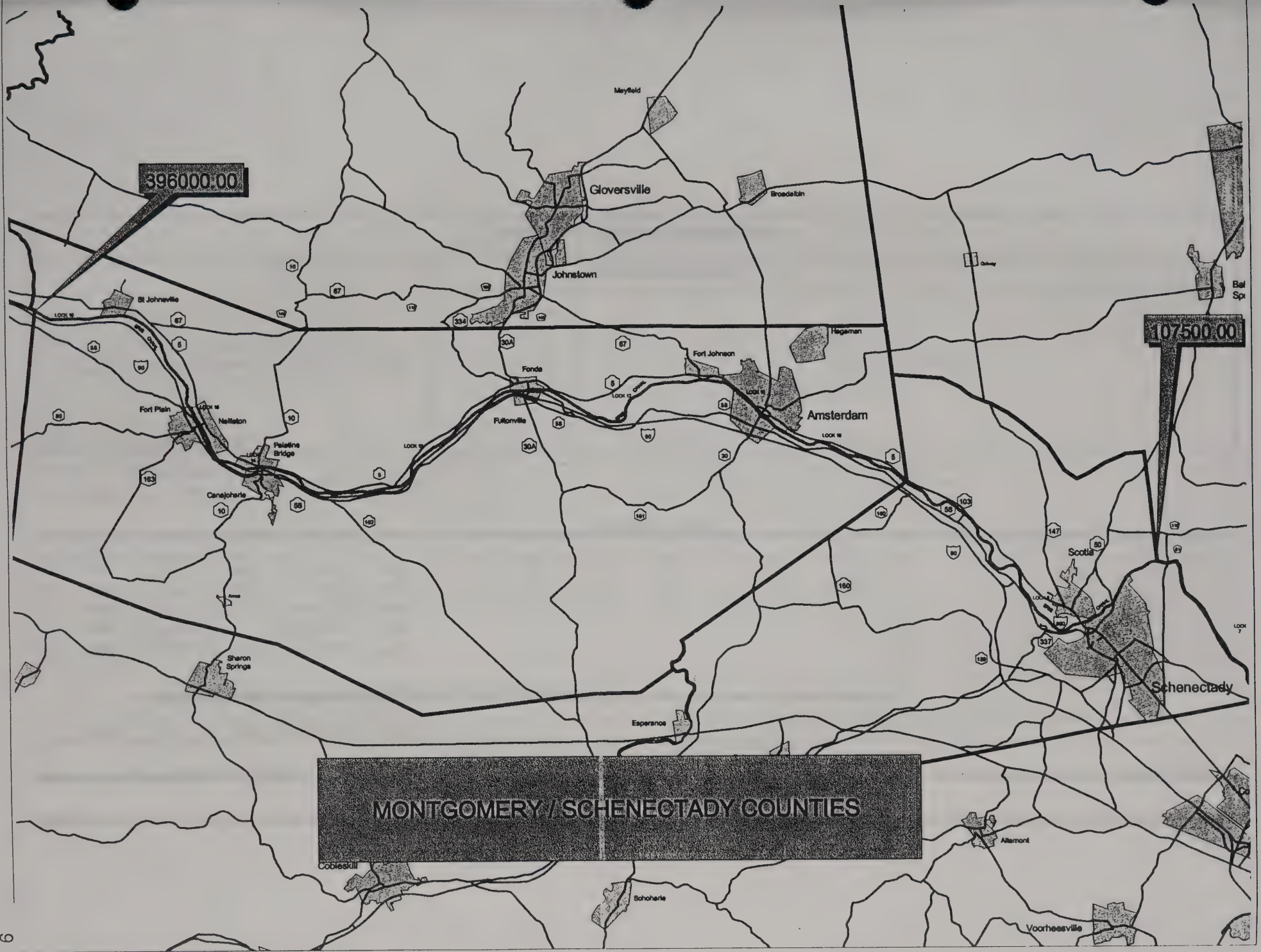
FIGURE 3 - COMPARISON OF THE TWO RATING SYSTEMS


WASHINGTON / SARATOGA COUNTY
LOCK 5
Schuylerville
Victory
Greenwich
Saratoga Springs
Ballston Spa
107500.00
Stillwater
CANAL
Round Lake
LOCK 3
CHAMPLAIN
Schaghticoke
Mechanicville
74000.00
LOCK 2
LOCK 1
140000.00
LOCK 7
Waterford
LOCK 5
LOCK 4
LOCK 3
LOCK 2
Schenectady
Cohoes
Green Island
Watervliet
Colonie
Troy

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
		CHAMPLAIN CANAL													
1	ALB-1	165+50	170+00	EAST & WEST SIDE	WASHINGTON	0	9	3	12	2	0	0	26	5	Site directly North of Lock C-6. Old canal at toe.
		WASHINGTON COUNTY													
		CHAMPLAIN CANAL													
1	ALB-1	897+50 (Lock C-3)		WESTSIDE	SARATOGA	0	0	2	6	0	0	0	8	7	
		OLD CHAMPLAIN CANAL													
1	ALB-1	in WATERFORD		EASTSIDE	SARATOGA	0	0	0	0	4	1	5	10	7	Fulton ST. to G.E. Landfill
1	ALB-1	GLENS FALLS FEEDER													
1	ALB-1	96+00	168+00	SOUTHSIDE	SARATOGA	15	0	5	6	2	0	1	29	2	Rt 4 to Quaker Rd- Wet along toe of slope - Comment and drawing with inspection form
1	ALB-2	ERIE CANAL													
1	ALB-2	234+00	242+00	NORTHSIDE	SARATOGA	5	0	4	6	2	0	5	22	6	Lock E-4, Boil visible within lock - Wet along toe of slope. Comments and drawing with inspection form.
		SARATOGA COUNTY													

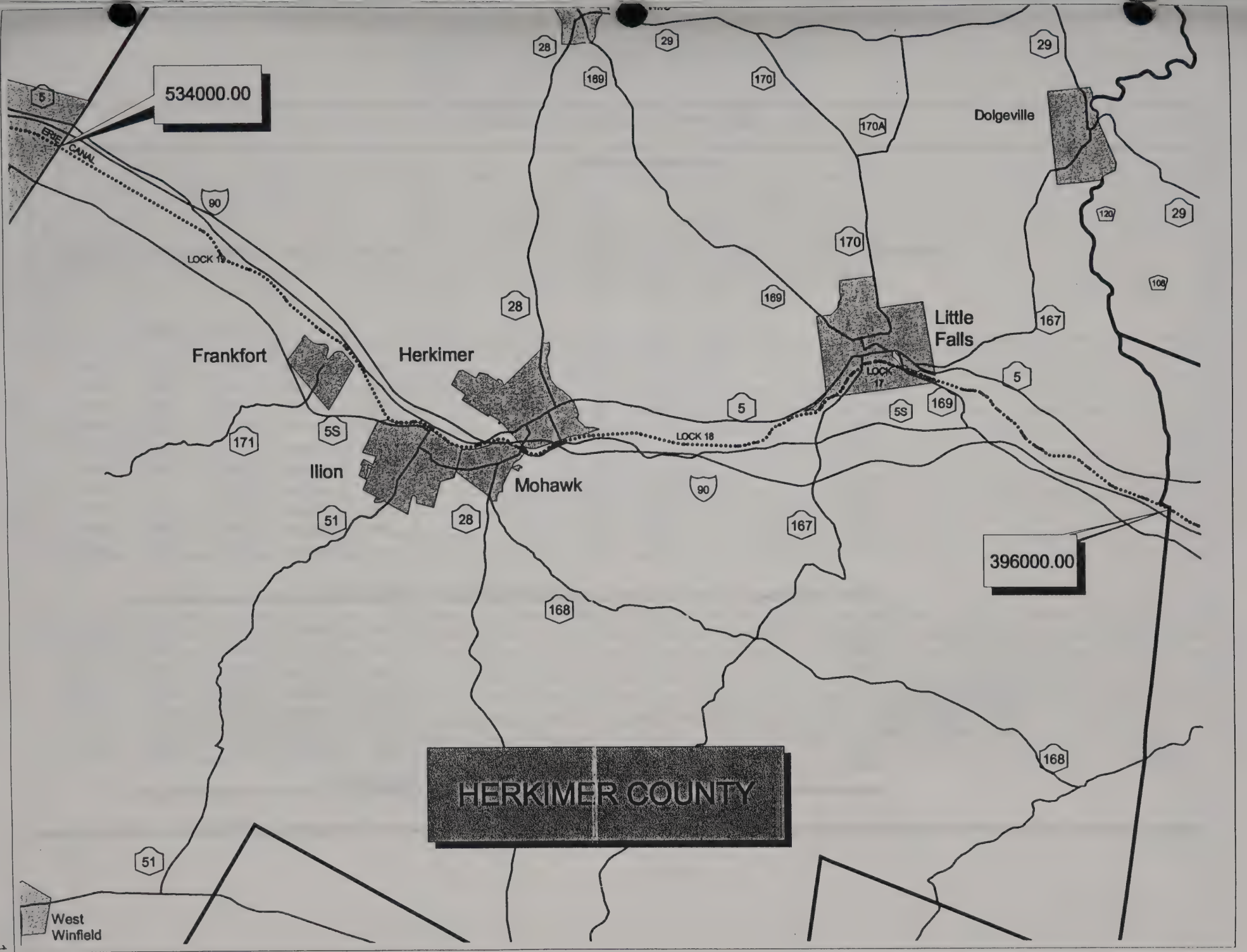
WASHINGTON AND SARATOGA COUNTIES-VARIOUS CANALS


396000.00
107500.00
Mayfield
Gloversville
Broadalbin
Johnstown
St Johnsville
Hagaman
Fort Johnson
Fonda
Fort Plain
Nelliston
Fultonville
Amsterdam
Palatine Bridge
Canajoharie
Scotia
Schenectady
Sharon Springs
Esperance
Cobleskill
Schoharie
Altamont
Voorheesville
MONTGOMERY / SCHENECTADY COUNTIES

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
1	ALB-2	ERIE CANAL 840+00 (Lock E-7)		SOUTHSIDE	SCHENECTADY	0	0	3	0	0	0	0	3	7	Core wall
					SCHENECTADY COUNTY										
2	SYR-4	3873	3882	SOUTHSIDE	MONT								0	6	
2	SYR-4	3882	3882+50	SOUTHSIDE	MONT	0	3	3	3	2	2	2	15	3	
2	SYR-4	3882+50	3925	SOUTHSIDE	MONT									6	
2	SYR-4	3890+52-4086		SOUTHSIDE	MONT									6	
2	SYR-4	3882+50	3925	SOUTHSIDE	MONT									6	
					MONTGOMERY COUNTY - ERIE CANAL - SOUTH										
2	SYR-4	3873	4095	NORTHSIDE	MONT									6	
					MONTGOMERY COUNTY - ERIE CANAL - NORTH										

SCHENECTADY AND MONTGOMERY COUNTIES


534000.00
396000.00
Frankfort
Herkimer
Ilion
Mohawk
Little Falls
Dolgeville
West Winfield
LOCK 18
LOCK 17
ERIE CANAL
HERKIMER COUNTY
28
29
169
170
170A
90
5
5S
171
51
167
168
120
108

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
2	SYR-4	4520	4601	SOUTHSIDE	HERK								0	6	
2	SYR-4	4764	4781	SOUTHSIDE	HERK									6	
2	SYR-4	4970	5150	SOUTHSIDE	HERK								0	6	
2	SYR-4	5170	5340+65	SOUTHSIDE	HERK								0	6	
2	SYR-4	5301+96	5346	SOUTHSIDE	HERK									6	
2	SYR-4	5346	5347	SOUTHSIDE	HERK	0	3	3	3	2	1	1	13	5	
2	SYR-4	5347	5419	SOUTHSIDE	HERK									6	
2	SYR-4	5441	5504	SOUTHSIDE	HERK									6	
2	SYR-4	5642	5835	SOUTHSIDE	HERK									6	
2	SYR-4	5842	5919	SOUTHSIDE	HERK									6	
			HERKIMER COUNTY - ERIE CANAL - SOUTHSIDE												
2	SYR-4	4520	4572	NORTHSIDE	HERK									6	
2	SYR-4	4572	4572+50	NORTHSIDE	HERK	0	4	3	3	2	4	1	17	2	
2	SYR-4	4572+50	4656	NORTHSIDE	HERK									6	
2	SYR-4	4656	4658	NORTHSIDE	HERK								*	*	SURVEY SECTIONS TAKEN
2	SYR-4	4658	4669+50	NORTHSIDE	HERK								*	*	SURVEY SECTIONS TAKEN
2	SYR-4	4669+50	4670+50	NORTHSIDE	HERK	4	3	3	3	3	0	0	*	*	SURVEY SECTIONS TAKEN
2	SYR-4	4670+50	4718	NORTHSIDE	HERK									6	

* = under design

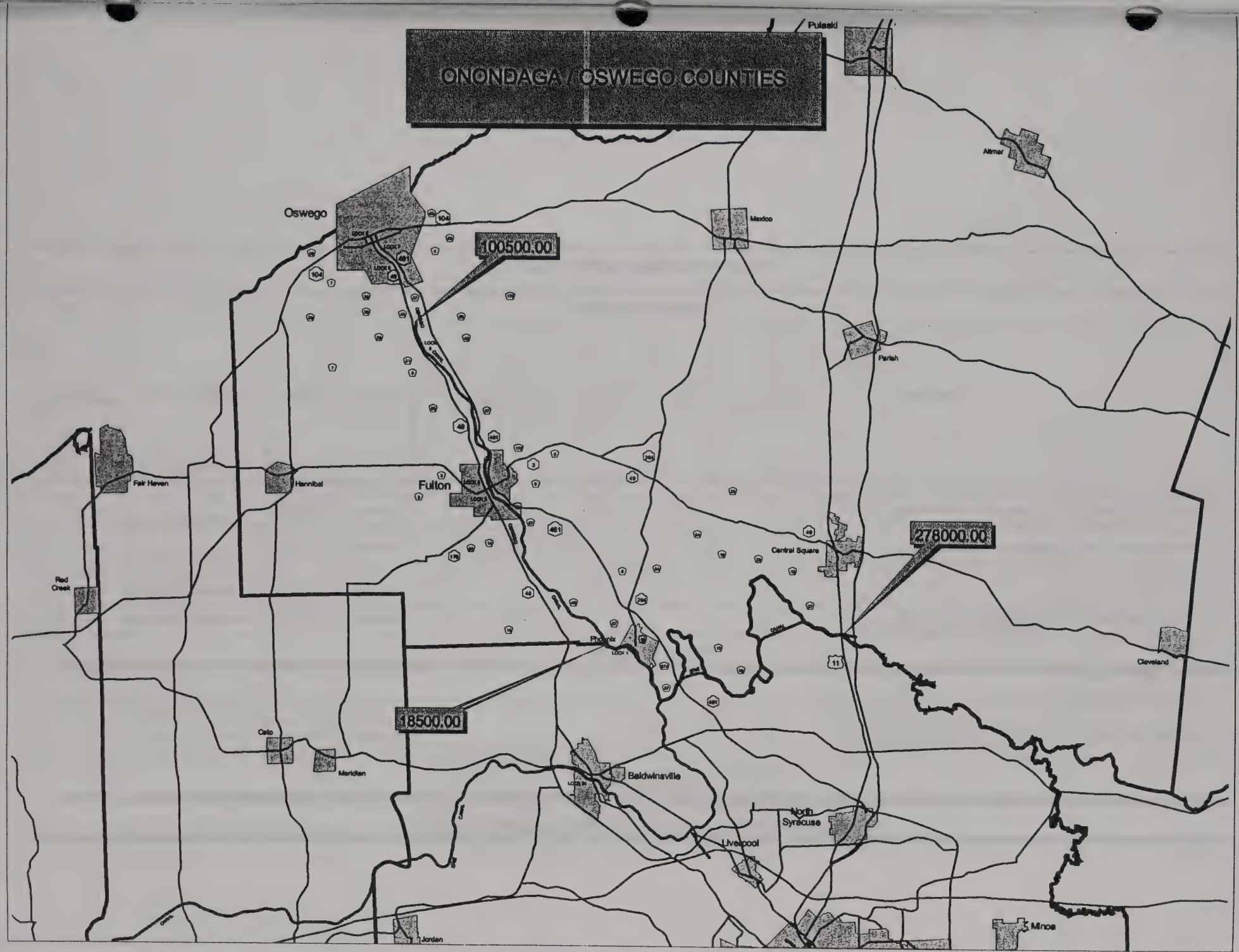
HERKIMER COUNTY - ERIE CANAL - NORTHSIDE

HERKIMER COUNTY - ERIE CANAL

ONEIDA COUNTY
696500.00
534000.00
Camden
Rome
Sylvan Beach
Canastota
Oneida
Oneida Castle
Sherrill
Wampsville
Chittenango
Vernon
Clinton
Whitesboro
Yorkville
New York Mills
Utica
New Hartford
Oriskany
Holland Patent
Barneveld
Remsen
Prospect
Frankfort
Ilion
CANAL
LOCK 22
LOCK 21

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING		COMMENTS
2	SYR-4	5301+96	5346	SOUTHSIDE	ONIEDA								0	5	5	
2	SYR-4	5346	5347	SOUTHSIDE	ONEIDA	0	3	3	3	2	1	1	13	2	2	RECOMMEND PERIODIC MAINT. OF SLOPES
2	SYR-4	5347	5419	SOUTHSIDE	ONIEDA								0	5	5	
2	SYR-4	5441	5504	SOUTHSIDE	ONEIDA								0	5	5	
2	SYR-4	5642	5835	SOUTHSIDE	ONEIDA								0	5	5	
2	SYR-4	5842	5919	SOUTHSIDE	ONEIDA								0	5	5	
2	SYR-4													5	5	
					ONEIDA COUNTY - ERIE CANAL - SOUTH											
2	SYR-4	5441	5504	NORTHSIDE	ONEIDA									6	6	
2	SYR-4	5768	5833	NORTHSIDE	ONEIDA									6	6	
2	SYR-4	5881	5881	NORTHSIDE	ONEIDA									6	6	
2	SYR-4	5730	5745	SOUTHSIDE	ONEIDA									6	6	Added since last inspection as aresult of minor leak-minimum embankment at site.
					ONEIDA COUNTY - ERIE CANAL - NORTH											
2	SYR-4	NINE MILE		SOUTHSIDE/ NORTHSIDE	ONEIDA									6	6	W. CANADA CRK. TO N. GAGE RD. (REMSON QUAD).
2	SYR-4	NINE MILE		SOUTHSIDE/ NORTHSIDE	ONEIDA									6	6	N. GAGE RD. TO NINE MILE CRK. (S. TRENTON QUAD).
					ONEIDA COUNTY - NINE MILE											
					ONEIDA COUNTIES - VARIOUS CANALS											


ONONDAGA / OSWEGO COUNTIES
Pulaski
Altmar
Oswego
Mexico
100500.00
Parish
Fair Haven
Hannibal
Fulton
278000.00
Central Square
Red Creek
Phoenix
Cleveland
18500.00
Meriden
Baldwinsville
North Syracuse
Liverpool
Jordan
Minoa

SUMMARY FOR 1998 INSPECTION

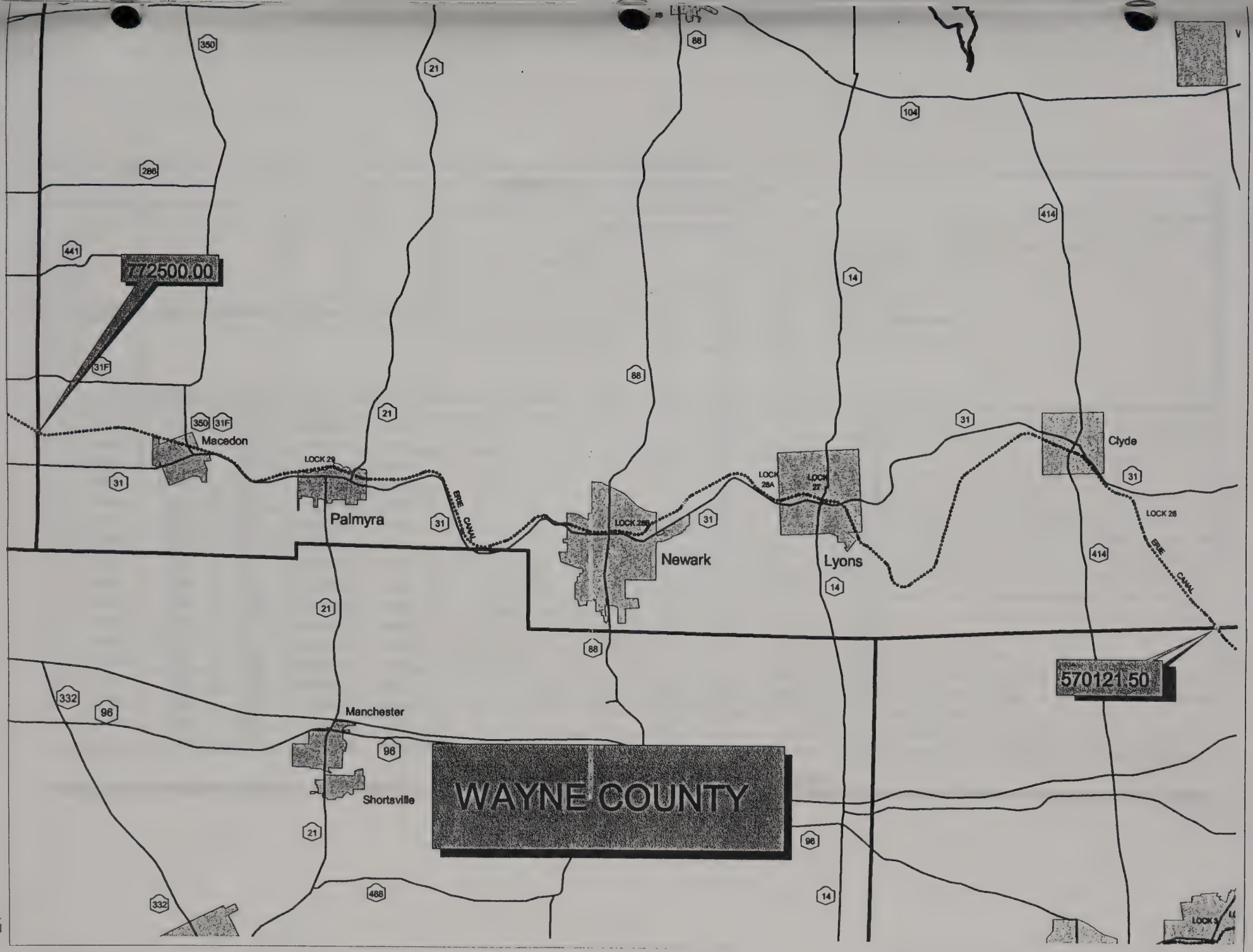
DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING		COMMENTS
3	SYR-5	OLD ERIE CANAL		SOUTHSIDE/ NORTHSIDE	ONONDAGA									5	5	EROSION OF OUTBOARD TOE AT CULVERT. RECOMMEND FACING BOTTOM THIRD WITH SLOPE PROTECTION
3	SYR-4	OLD ERIE CANAL		SOUTHSIDE/ NORTHSIDE	ONONDAGA,									6	6	SITE LIMITS ARE FROM APPROX. 2550' W. OF BURDICK RD. TO ERIE CANAL AT NEW LONDON
3	SYR-5	OLD ERIE FEEDER		SOUTHSIDE/ NORTHSIDE	ONONDAGA									6	6	
3	SYR-5	OLD ERIE FEEDER		SOUTHSIDE/ NORTHSIDE	ONONDAGA									6	6	BUTTERNUT CREEK. 1000'+/- SOUTH OF OLD ERIE TO OLD ERIE NEAR NORTHSIDE 481

ONONDAGA COUNTY

3	SYR-5	OSWEGO CANAL 505	605	EASTSIDE	OSWEGO									6	6	CITY OF FULTON, SOUTH OF L-2; CANAL IS IN OSWEGO RIVER IN THIS AREA

OSWEGO COUNTY

ONONDAGA AND OSWEGO COUNTIES - VARIOUS CANALS


772500.00
570121.50
WAYNE COUNTY
Macedon
Palmyra
Newark
Lyons
Clyde
Manchester
Shortsville
LOCK 29
LOCK 28B
LOCK 28A
LOCK 27
LOCK 26
ERIE CANAL
350
286
441
31F
31
21
88
104
414
14
332
96
488

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
4	SYR-6	6633	6710	NORTHSIDE	WAYNE									6	
4	SYR-6	6710+/-	6710+/-	NORTHSIDE	WAYNE	4	0	2	2	2	1	1	12	5	
4	SYR-6	6710	6716	NORTHSIDE	WAYNE									6	
4	SYR-6	6716+/-	6716+/-	NORTHSIDE	WAYNE									6	
4	SYR-6	6716	6737	NORTHSIDE	WAYNE									6	
4	SYR-6	6711	6737	NORTHSIDE	WAYNE									6	
4	SYR-6	6753	6811	NORTHSIDE	WAYNE									6	
4	SYR-6	7216	7218	NORTHSIDE	WAYNE	4	0	1	0	0	0	1	6	5	
4	SYR-6	7538	7607	NORTHSIDE	WAYNE									6	
4	SYR-6	7538	7559	NORTHSIDE	WAYNE									6	
4	SYR-6	7559	7591	NORTHSIDE	WAYNE									6	
4	SYR-6	7591	7627	NORTHSIDE	WAYNE									6	
4	SYR-6	7607	7608	NORTHSIDE	WAYNE	1	3	2	4	2	1	2	15	5	
4	SYR-6	7627	7660	NORTHSIDE	WAYNE									6	
4	SYR-6	7660	7693	NORTHSIDE	WAYNE									6	
4	SYR-6	7693	7698	NORTHSIDE	WAYNE									6	
4	SYR-6	7693	7398	NORTHSIDE	WAYNE									6	

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
4	SYR-6	6631	6639+50	SOUTHSIDE	WAYNE	0	0	3	2	2	0	4	11	**5**	
4	SYR-6	6639+50	6648	SOUTHSIDE	WAYNE									**6**	
4	SYR-6	6648 +/-	6648 +/-	SOUTHSIDE	WAYNE									**5**	
4	SYR-6	6649+50	6710	SOUTHSIDE	WAYNE									**6**	
4	SYR-6	6710 +/-	6710 +/-	SOUTHSIDE	WAYNE	4	3	3	3	2	1	1	17	**4**	
4	SYR-6	6710	6751	SOUTHSIDE	WAYNE									**6**	
4	SYR-6	7387	7400	SOUTHSIDE	WAYNE									**6**	
4	SYR-6	7400	7422	SOUTHSIDE	WAYNE									**6**	

WAYNE COUNTY - ERIE CANAL - SOUTHSIDE

3	SYR-6	oswego Canal-South of Lock 2		EASTSIDE										6	

WAYNE COUNTY - OSWEGO CANAL -- EASTSIDE

WAYNE COUNTY - ERIE (SOUTHSIDE) AND OSWEGO CANALS - NORTH AND SOUTH

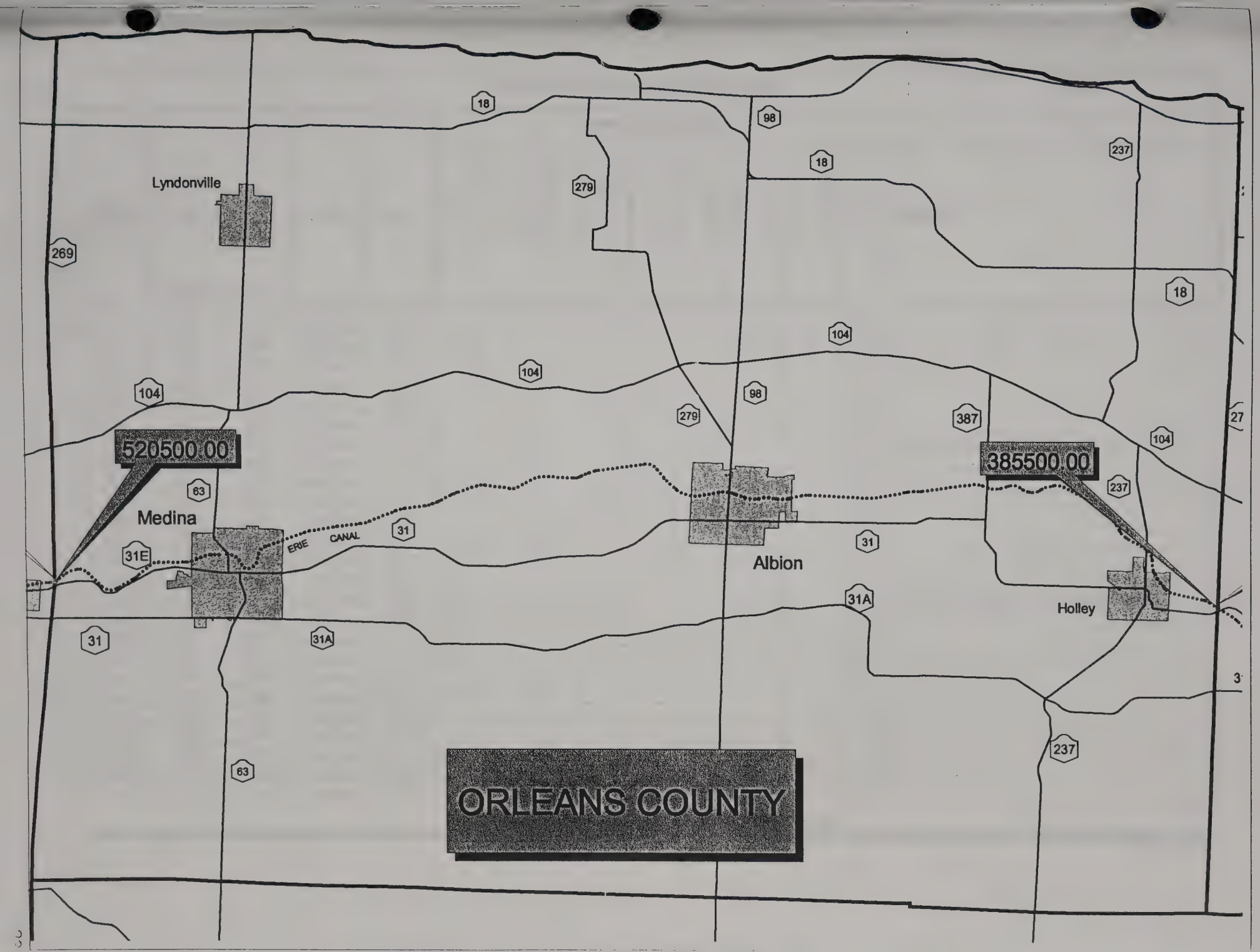
385500.00
772500.00
MONROE COUNTY
ROCHESTER
Hilton
Brockport
Spencerport
Webster
East Rochester
Fairport
Pittsford
Churchville
Bergen
Victor
LOCK 33
ERIE CANAL

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING		OFFSET	COUNTY	RISK ASSESSMENT									COMMENTS
		FROM	TO			SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	
4	BUF-7	1925	2001	NORTHSIDE	MONROE	0	0	5	3	4	0	5	17	6	
4	BUF-7	2001	2055	NORTHSIDE	MONROE	5	12	2	13	5	0	1	38	5	flatten slope
4	BUF-7	2064	2066	NORTHSIDE	MONROE	0	0	5	0	5	0	5	15	6	Bushnell Basin site
4	BUF-7	2067	2075	NORTHSIDE	MONROE	0	0	0	1	0	0	5	6	6	
4	BUF-7	2085	2125	NORTHSIDE	MONROE										Trees down. Check in the fall of 1999
4	BUF-7	2136	2170	NORTHSIDE	MONROE										Trees down. Check in the fall of 1999
4	BUF-7	2225	2265	NORTHSIDE	MONROE	0	0	5	0	0	0	5	10	6	
4	BUF-7	3050	3079	NORTHSIDE	MONROE	5	4	4	2	4	0	4	23	6	
4	BUF-7	3107	3188	NORTHSIDE	MONROE	0	0	4	6	4	0	3	17	6	
4	BUF-7	3220	3280	NORTHSIDE	MONROE	10	4	3	9	4	0	5	35	5	
4	BUF-7	3300	3315	NORTHSIDE	MONROE	0	3	3	10	1	0	5	22	6	
4	BUF-7	3315	3360	NORTHSIDE	MONROE	20	5	3	8	2	0	5	43	4	
4	BUF-7	3360	3395	NORTHSIDE	MONROE	0	0	1	1	4	0	4	10	6	
4	BUF-7	3400	3436	NORTHSIDE	MONROE	0	6	3	7	0	0	4	20	6	
4	BUF-7	3441	3480	NORTHSIDE	MONROE	0	5	5	9	1	0	5	25	6	
4	BUF-7	3520	3527	NORTHSIDE	MONROE	0	3	2	2	5	0	2	14	6	
4	BUF-7	3572	3592	NORTHSIDE	MONROE	0	0	1	6	2	0	3	12	6	
4	BUF-7	3610	3630	NORTHSIDE	MONROE	0	0	1	9	4	0	3	17	6	
4	BUF-7	3630	3736	NORTHSIDE	MONROE	0	12	1	13	4	0	5	35	5	
4	BUF-7	3742	3841	NORTHSIDE	MONROE	20	11	4	9	5	0	1	50	4	

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
4	BUF-7	2064	2066	SOUTHSIDE	MONROE	0	0	5	0	5	0	4	14	6	BUSHNELL BASIN SEWER SITE
4	BUF-7	2105	2140	SOUTHSIDE	MONROE										LARGE TREES DOWN-REINSPECT TO DETERMINE CLEANUP
4	BUF-7	2235	2305	SOUTHSIDE	MONROE	5	0	1	6	5	0	4	21	6	
4	BUF-7	3050	3072	SOUTHSIDE	MONROE	15	0	0	6	5	0	1	27	3	WATER LEVEL AT TOE EQUAL TO WATER IN CANAL
4	BUF-7	3173	3188	SOUTHSIDE	MONROE									?	NOT ACCESSABLE
4	BUF-7	3265	3282	SOUTHSIDE	MONROE	0	7	4	6	1	0	5	23	6	
4	BUF-7	3305	3311	SOUTHSIDE	MONROE	20	0	2	9	2	0	5	38	4	
4	BUF-7	3342	3350	SOUTHSIDE	MONROE	20	9	2	13	2	0	1	47	4	
4	BUF-7	3430	3445	SOUTHSIDE	MONROE	20	9	2	9	5	0	3	48	4	EAST OF ADAMS BASIN
4	BUF-7	3445	3480	SOUTHSIDE	MONROE	0	9	4	9	5	0	1	28	6	
4	BUF-7	3630	3645	SOUTHSIDE	MONROE	0	3	4	6	0	0	4	17	6	
4	BUF-7	3665	3670	SOUTHSIDE	MONROE	0	0	2	1	0	0	5	8	7	
4	BUF-7	3710	3725	SOUTHSIDE	MONROE	20	9	3	9	2	0	5	48	4	
4	BUF-7	3740	3768	SOUTHSIDE	MONROE	12	0	2	9	1	0	5	29	6	
4	BUF-7	3773	3823	SOUTHSIDE	MONROE	15	9	2	9	5	0	5	45	4	
4	BUF-7	3847	3890	SOUTHSIDE	MONROE	0	0	2	6	2	0	5	15	6	

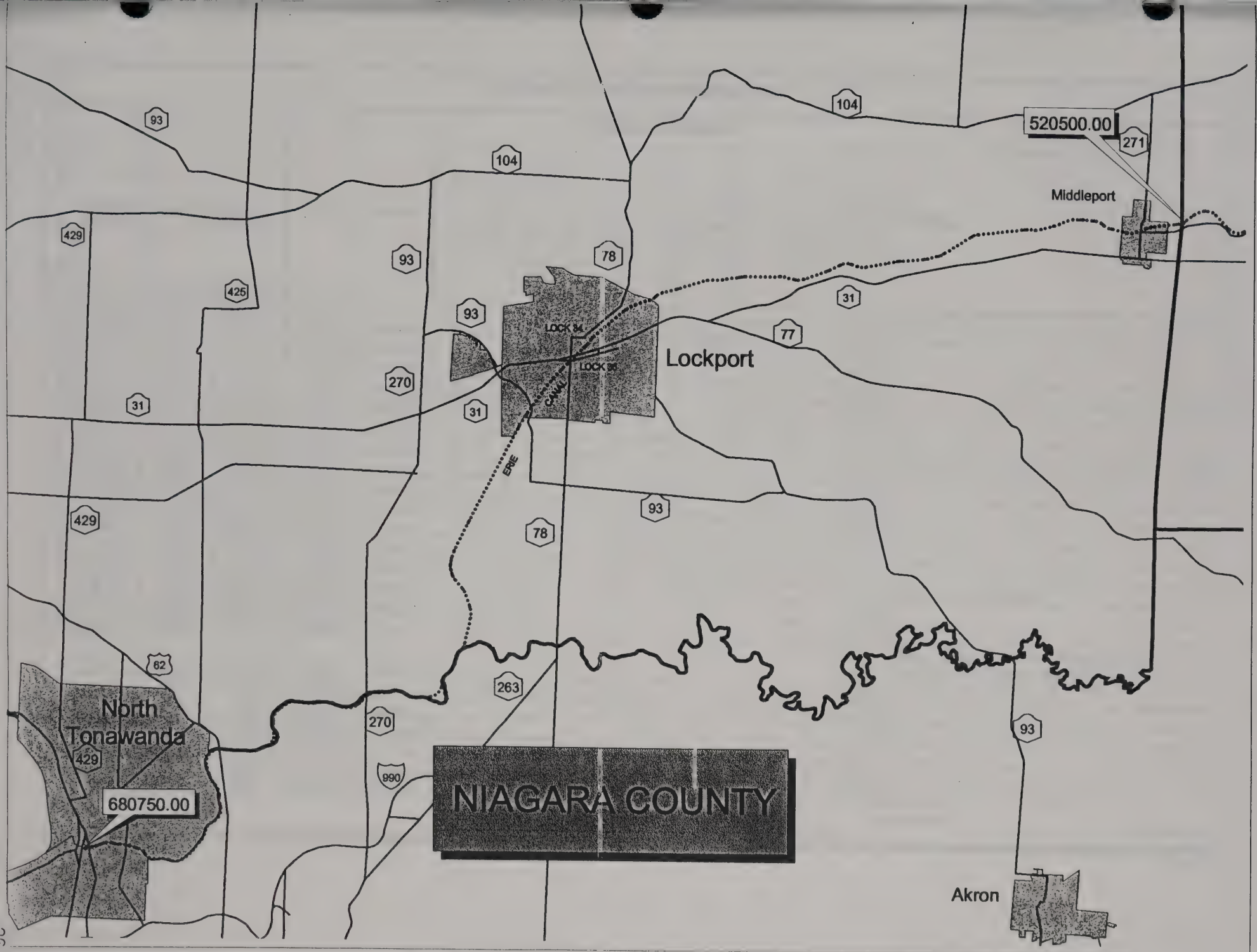

Lyndonville
Medina
Albion
Holley
520500.00
385500.00
ERIE CANAL
ORLEANS COUNTY
18
98
237
279
269
104
387
63
31
31E
31A

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
4	BUF-7	3860	3895	NORTHSIDE	ORLEAN	0	0	2	9	5	0	0	16	6	
4	BUF-7	3905	3929	NORTHSIDE	ORLEAN	0	0	5	3	4	0	0	12	6	
4	BUF-7	3930	3956	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	3965	4024	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4074	4087	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4099	4123	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4134	4273	NORTHSIDE	ORLEAN								0	6	MANY WATER FILLED QUARRIES NEAR TOE
4	BUF-7	4307	4409	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4409	4419	NORTHSIDE	ORLEAN	0	12	4	12	4	0	5	37	6	
4	BUF-7	4420	4494	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4510	4523	NORTHSIDE	ORLEAN	5	9	4	9	4	0	0	31	5	
4	BUF-7	4523	4584	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4584	4590	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4590	4600	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4603	4607	NORTHSIDE	ORLEAN								0	6	CULVERT #86-SHEETING PRESENT IN EMBANKMENT
4	BUF-7	4615	4619	NORTHSIDE	ORLEAN	20	9	3	9	1	0	5	47	4	
4	BUF-7	4619	4687	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4687	4700	NORTHSIDE	ORLEAN	20	6	4	6	0	0	0	36	4	
4	BUF-7	4700	4780	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4780	4800	NORTHSIDE	ORLEAN	20	9	2	9	3	0	3	46	4	
4	BUF-7	4810	4850	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	4852	4864	NORTHSIDE	ORLEAN									4	
4	BUF-7	4864	4900	NORTHSIDE	ORLEAN									6	
4	BUF-7	5006	5169	NORTHSIDE	ORLEAN								0	6	
4	BUF-7	5185	5206	NORTHSIDE	ORLEAN								0	6	

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
4	BUF-7	3913	3925	SOUTHSIDE	ORLEAN									5	CULVERT #65-COUNTY LINE
4	BUF-7	3930	3960	SOUTHSIDE	ORLEAN									5	CULVERT #66- TREE DAMAGE
	BUF-7	4250	4275	SOUTHSIDE	ORLEAN									6	AROUND CULVERTS #73 & 74-SMALL PONDS ADJACENT AT SAME ELEV.
4	BUF-7	4355	4395	SOUTHSIDE	ORLEAN									5	CULVERT # 75 & 76
4	BUF-7	4409	4420	SOUTHSIDE	ORLEAN	0	0	15	3			3	21	4	THRU VILLAGE
4	BUF-7	4450	4492	SOUTHSIDE	ORLEAN									5	CULVERT #82-NEEDS INBOARD WORK
4	BUF-7	4512	4528	SOUTHSIDE	ORLEAN									4	SHOULD DO STONE INBOARD WORK
4	BUF-7	4530	4540	SOUTHSIDE	ORLEAN									4	ENDS AT CULVERT #84
4	BUF-7	4579	4584	SOUTHSIDE	ORLEAN									6	ENDS AT WIDE WATERS
4	BUF-7	4584	4590	SOUTHSIDE	ORLEAN	0	0	15	3			0	18	4	TREES BLOWN DOWN-CULVERT #86
4	BUF-7	4590	4595	SOUTHSIDE	ORLEAN									5	TREES BLOWN DOWN-NEAR WASTE WIER
4	BUF-7	4603	4611	SOUTHSIDE	ORLEAN									6	CULVERT #87
		3880	3882	SOUTHSIDE	ORLEAN									5	CULVERT #88- MIN. EMB.
4	BUF-7	4641	4650	SOUTHSIDE	ORLEAN									4	SLOUGHED INBOARD SLOPE
4	BUF-7	4852	4864	SOUTHSIDE	ORLEAN	15	0	15	3			3	36	4	SECTION ENDS AT CULVERT #95-CULVERT LEAKS EVEN THOUGH RELINED
4	BUF-7	4895	4900	SOUTHSIDE	ORLEAN									5	CULVERT #99-BEALS ROAD
4	BUF-7	5130	5131	SOUTHSIDE	ORLEAN									3	CULVERT #103-NEW SITE-SLOPE ADJACENT TO PIPE ERODED BY STREAM
4	BUF-7	5028	5150	SOUTHSIDE	ORLEAN										



520500.00
Middleport
Lockport
LOCK 34
LOCK 36
CANAL
ERIE
North Tonawanda
680750.00
NIAGARA COUNTY
Akron
93
104
271
429
425
78
31
77
270
62
263
990

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
5	BUF-7	5206	5222	NORTHSIDE	NIAGARA	0	12	2	12	4	0	3	33	5	
5	BUF-7	5222	5240	NORTHSIDE	NIAGARA	0	9	3	9	3	0	3	27	**5**	
5	BUF-7	5276	5295	NORTHSIDE	NIAGARA	0	6	3	6	1	0	4	20	**6**	
5	BUF-7	5315	5325	NORTHSIDE	NIAGARA	10	9	5	6	2	0	4	36	**4**	
5	BUF-7	5332	5339	NORTHSIDE	NIAGARA	0	6	2	9	2	0	1	20	**6**	
5	BUF-7	5339	5354+50	NORTHSIDE	NIAGARA	0	9	5	6	1	0	1	22	**5**	
5	BUF-7	5354+50	5397	NORTHSIDE	NIAGARA	10	6	4	0	2	0	3	25	**4**	
5	BUF-7	5397	5415	NORTHSIDE	NIAGARA	0	12	5	9	5	0	3	34	**4**	
5	BUF-7	5415	5425	NORTHSIDE	NIAGARA	0	3	2	6	2	1	3	17	**5**	
5	BUF-7	5425	5436	NORTHSIDE	NIAGARA	0	3	2	6	4	0	1	16	**5**	
5	BUF-7	5436	5482	NORTHSIDE	NIAGARA	0	0	2	0	2	1	3	8	**6**	
5	BUF-7	5482	5489	NORTHSIDE	NIAGARA	0	0	5	6	1	0	2	14	**5**	
5	BUF-7	5489	5586	NORTHSIDE	NIAGARA	0	9	4	6	2	1	4	26	**4**	
5	BUF-7	5553	5559	NORTHSIDE	NIAGARA									*	under design-culvert #109
5	BUF-7	5586	5605	NORTHSIDE	NIAGARA	0	0	3	0	2	1	1	7	**6**	
5	BUF-7	5605	5614	NORTHSIDE	NIAGARA	0	0	3	6	4	0	1	14	**6**	
5	BUF-7	5645	5656	NORTHSIDE	NIAGARA	0	9	4	6	2	1	1	23	*	Under Design+Culvert #118(In-situ formed liner)=Buried concrete cut-off wall
5	BUF-7	5694	5700	NORTHSIDE	NIAGARA	0	3	2	3	1	1	4	14	**5**	
5	BUF-7	5700	5714	NORTHSIDE	NIAGARA	0	3	3	3	1	1	3	14	**6**	
5	BUF-7	5714	5730	NORTHSIDE	NIAGARA	0	9	4	6	3	0	2	24	**5**	
5	BUF-7	5730	5745	NORTHSIDE	NIAGARA	10	12	3	9	4	1	5	41	**4**	
5	BUF-7	5745	5756	NORTHSIDE	NIAGARA	0	6	2	9	6	0	4	21	**5**	
5	BUF-7	5756	5770	NORTHSIDE	NIAGARA	0	6	3	9	6	1	4	23	**6**	

* = under design

NIAGARA COUNTY - ERIE CANAL - NORTHSIDE

SUMMARY FOR 1998 INSPECTION

DOT REGION	DIVISION-SECTION	CANAL STATIONING FROM	CANAL STATIONING TO	OFFSET	COUNTY	RISK ASSESSMENT: SEEPAGE	TOP WIDTH	OUTBOARD EMBANKMENT HEIGHT	OUTBOARD SLOPE	OUTBOARD GROWTH	INBOARD SLOPE	ADJACENT TERRAIN	TOTAL	RATING	COMMENTS
5	BUF-7	5206	5222	SOUTHSIDE	NIAGARA									5	
5	BUF-7	5222	5240	SOUTHSIDE	NIAGARA	0	3	2	6			5	16	4	
5	BUF-7	5276	5295	SOUTHSIDE	NIAGARA									3	CULVERT #108- CATTAILS ON SLOPE
5	BUF-7	5332	5339	SOUTHSIDE	NIAGARA	5	12	3	15			1	36	5	CATTAILS ON TOE OF SLOPE
5	BUF-7	5339	5342+50	SOUTHSIDE	NIAGARA	?		?	?	?		?		*	WATSONS WASTE WEIR-UNDER DESIGN
5	BUF-7	5397	5415	SOUTHSIDE	NIAGARA	0	15	5	12			1	33	2	CULVERT #110-WRUCK ROAD
5	BUF-7	5415	5425	SOUTHSIDE	NIAGARA									6	
5	BUF-7	5425	5436	SOUTHSIDE	NIAGARA	0	15	4	12			1	32	2	STEEP OBOARD SLOPE-CULVERT #111
5	BUF-7	5436	5482	SOUTHSIDE	NIAGARA	5		1	6	0	0	0	12	6	VERY LOW EMBANKMENTS (4-5 FT.).
5	BUF-7	5482	5489	SOUTHSIDE	NIAGARA	0	9	3	6			1	19	*	CULVERT #113-UNDER DESIGN
5	BUF-7	5489	5586	SOUTHSIDE	NIAGARA									6	
5	BUF-7	5586	5605	SOUTHSIDE	NIAGARA									6	
5	BUF-7	5605	5614	SOUTHSIDE	NIAGARA	0	9	4	12			1	26	4	Inboard repairs completed
5	BUF-7	5645	5656	SOUTHSIDE	NIAGARA	5	15	5	12			5	42	4	CULVERT #118- OTHER SIDE OF INSITU-FORM
5	BUF-7	5694	5700	SOUTHSIDE	NIAGARA	0	15	3	12			4	34	4	CULVERT #119-SAND PIT & GROFF ROAD
5	BUF-7	5700	5714	SOUTHSIDE	NIAGARA									6	
5	BUF-7	5714	5730	SOUTHSIDE	NIAGARA	0	15	5	12			1	33	*	UNDER DESIGN - CULVERT #120
5	BUF-7	5730	5745	SOUTHSIDE	NIAGARA									6	
5	BUF-7	5745	5756	SOUTHSIDE	NIAGARA	5	25	3	12			1	46	4	CULVERT #121 EXTENDED
5	BUF-7	5756	5770	SOUTHSIDE	NIAGARA	0	0	2	0	4	0	1	7	6	CULVERT #122

* = under design

NIAGARA COUNTY - ERIE CANAL - SOUTHSIDE

Appendix

1998 CANAL IMPOUNDING EMBANKMENT INSPECTIONS

GENERAL INFORMATION

INSPECTORS

a. GEB _____
b. DOT REGION _____
c. CANAL DIVISION _____

LOCATION

RESIDENCY SHEET
1 DIVISION _____
2 SECTION _____
3 SHEET NUMBER _____

STATION
NORTHSIDE ☐
SOUTHSIDE ☐
EASTSIDE ☐
WESTSIDE ☐

FROM STATION : _____
TO STATION : _____

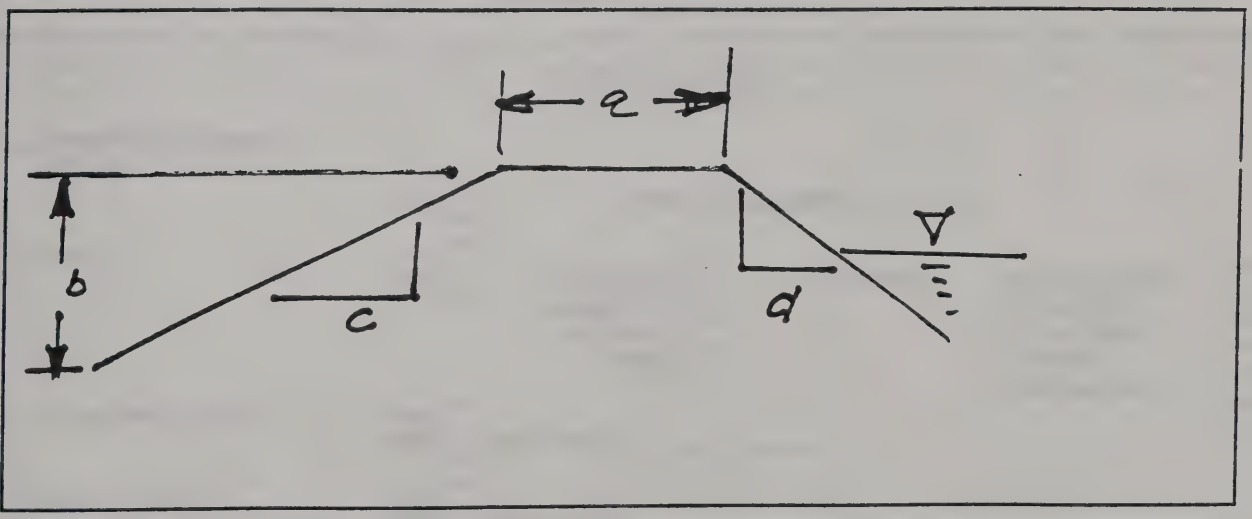
EMBANKMENT GEOMETRY

a. ESTIMATED TOP WIDTH _____

b. ESTIMATED OUTBOARD EMBANKMENT HEIGHT _____

c. OUTBOARD SLOPE =1 VERTICAL ON _____ HORIZONTAL

d. INBOARD SLOPE = 1 VERTICAL ON _____ HORIZONTAL



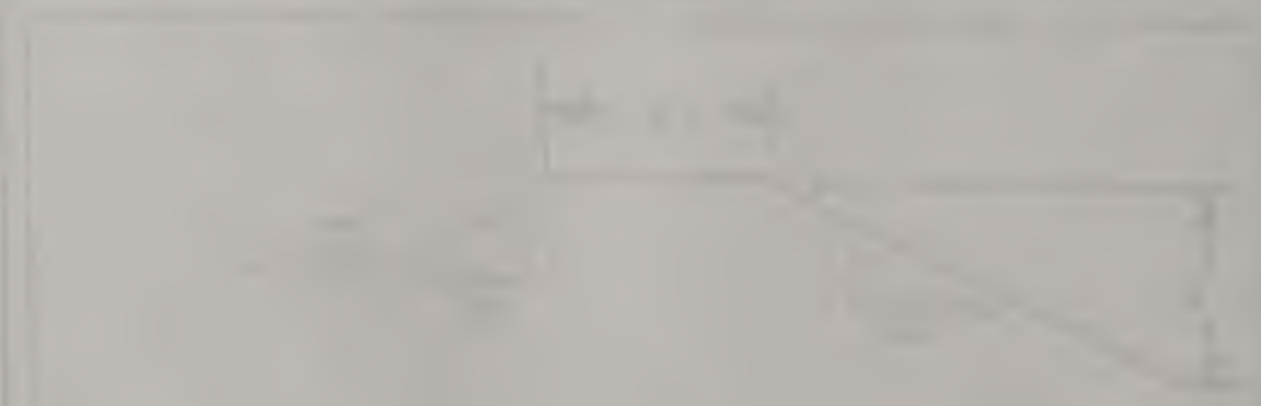
SEEPAGE INDICATORS

PROBLEM

☐ TOE CANNOT BE SEEN-INCONCLUSIVE
☐ NO SEEPAGE EVIDENT
☐ STANDING WATER AT TOE-SOURCE UNKNOWN
☐ SOFT TO WALK ON SLOPE
☐ CATTAILS ON SLOPE
☐ SLOUGHED OUTBOARD SLOPE (OLD)
☐ FLOWING WATER
☐ SINKHOLES

LOCATION OF PROBLEM

☐ TOP THIRD OF SLOPE
☐ MIDDLE THIRD OF SLOPE
☐ BOTTOM THIRD OF SLOPE



OUTBOARD SLOPE

a. COVER

1. GRASS 2. BRUSH 3. TREES 4. RIP RAP
5. OTHER _____

b. ANIMAL BURROWS NO ☐ YES ☐ REMARKS _____

c. DRAINAGE STRUCTURE(S) THROUGH/UNDER SLOPE

NO ☐ YES ☐

1. TYPE _____ 2. SIZE _____ 3. CONDITION _____

4. INFILTRATION INTO PIPE NO ☐ YES ☐

5. SEEPAGE AROUND PIPE NO ☐ YES ☐

6. COMMENTS _____

d. WALL AT TOE NO ☐ YES ☐ HEIGHT (FT) _____ LENGTH (FT) _____ CONDITION _____

e. STREAM AT TOE NO ☐ YES ☐ COMMENTS _____

INBOARD SLOPE

a. ERODED/SLOUGHED INBOARD SLOPE

NO ☐ YES ☐ COMMENT _____

b. WALL NO ☐ YES ☐

CONCRETE ☐ SHEETPILE ☐ MASONRY ☐ OTHER ☐

CONDITION: 1. NO DISTRESS ☐ 2. SPALLED ☐ 3. CRACKED ☐ 4. TILTED ☐ 5. DISPLACED ☐

c. SLOPE PROTECTION NO ☐ YES ☐ REMARKS _____

d. VEGETATION NO ☐ YES ☐ REMARKS _____

e. ANIMAL BURROWS NO ☐ YES ☐ REMARKS _____

ADJACENT TERRAIN

☐ LAND SLOPES UPHILL
☐ WOODED
☐ ACTIVE FARMLAND
☐ UNDEVELOPED
☐ DEVELOPED ☐ RECREATIONAL ☐ RESIDENTIAL ☐ COMMERCIAL/INDUSTRIAL

REMARKS _____

1998 - RISK ASSESSMENT SYSTEM

PARAMETER	WEIGHTED FACTORS							RANK
SEEPAGE	5	0	1		3		5	
	CRITERIA	NONE	MOIST AREA		BLEEDING		SEEPAGE	
	Description		SOFT TO WALK ON		CATTAILS ON SLOPE		**	
TOP WIDTH	3	0	1	2	3	4	5	
(SEE TABLE "A" ATTACHED)	CRITERIA	EQUAL TO OR GREAT OR THAN	LESS BY 5'	LESS BY 10'	LESS BY 15'	LESS BY 20'	LESS THAN 5' WIDE **	
OUTBOARD EMBANKMENT	1	0	1	2	3	4	5	
HEIGHT	CRITERIA	LESS THAN 5'	5'	10'	15'	20'	GREATER THAN 20'	
OUTBOARD SLOPE	3	0		2		4	5	
1VERTICAL ON ?? HORIZONTAL	CRITERIA	1V ON 3H OR FLATTER		1 ON 2		1 ON 1	STEEPER THAN 1 ON 1	
OUTBOARD SLOPE	1	0		2		4	5	
GROWTH	CRITERIA	GRASS		WOODY GROWTH		TREES	COMPLETELY OVERGROWN	
INBOARD SLOPE	1	0	1		3		5	
CONDITION (1V ON 2H STANDARD)	CRITERIA	RIP-RAP IN PLACE	SLOPE STABLE		SLOUGHING		ERODED	
ADJACENT TERRAIN	1	0	1		3		5	
	CRITERIA	LAND SLOPES UPHILL	WOODED-NO HOMES VISIBLE		ACTIVE FARMLAND		DEVELOPED	

** NOTIFY CANAL SUPERINTENDENT IMMEDIATELY

PLEASE PROVIDE COMMENTS BELOW IF A FIELD CONDITION EXISTS WHICH IS NOT ACCOUNTED FOR WITHIN THE TABLE (e.g. SLOUGHING, EROSION, DISTRESSED STRUCTURE, etc.).

TOTAL

RATING SYSTEM

1= Immediate emergency contract recommended
2= Begin monitoring system and schedule repairs soon
3= Should be improved prior to next 5 year inspection
4= Should be improved as part of normal scheduling
5= Satisfactory but shows signs of aging
6= Normal aging
7= No Deterioration

RATING

TABLE A (REORGANIZED)-
RECOMMENDED EMBANKMENT TOP WIDTH

EMBANKMENT HEIGHT, ft.	OUTBOARD SLOPE INCLINATION (Vertical : Horizontal)							
	WITHOUT SEEPAGE CONTROL					WITH SEEPAGE CONTROL		
	1 : 1	1 : 1.5	1 : 2	1 : 2.5	1 : 3 or flatter	1 : 1	1 : 1.5	1 : 2 or flatter
4	18	16	14	12	10	14	12	10
6	22	19	16	13	10	16	13	10
8	26	22	18	14	10	18	14	10
10	30	25	20	15	10	20	15	10
12	34	28	22	16	10	22	16	10
14	38	31	24	17	10	24	17	10
16 or greater	42	34	26	18	10	26	18	10

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